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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/767,820	01/24/2001	Karl-Heinz Wostbrock	51140	2187

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KEIL & WEINKAUF
1350 CONNECTICUT AVENUE, N.W.
WASHINGTON, DC 20036

EXAMINER

MANOHARAN, VIRGINIA

ART UNIT PAPER NUMBER

1764

DATE MAILED: 04/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/767,820	Applicant(s) WOSTBROCK ET AL.	
	Examiner Virginia Manoharan	Art Unit 1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors, e.g., typographical, grammar, idiomatic, syntax and etc. Applicants' cooperations are requested in correcting any errors of which applicants may become aware in the specification.

Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a). It is unclear what constitute the "F" factor within the context of the claimed invention. Also, the used of the abbreviation "F" without first identifying "F" in name in the claims is improper.

(b). The term "pure" e.g., in claims 1, 4, 6, 8 is a relative term which renders the claim indefinite. The term "pure" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention.

(c). Regarding claims 3, 7 & 10, the phrase "preferably" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

(d). Claim 9, as recited, provides for ambiguity and confusion. For examples:

1). The preamble of claim 9 recites "A distillation apparatus", whereas, claim 1 recites "A process" which is inconsistent therewith.

2). Claim 9 is an incomplete claim as it does not specify the structural elements of the apparatus and the structural connections of the elements relative to each other .

3). The limitation(s) recited in the body of claim 9 is (are) already recited in claim 1, the claim from which it depends, claimed twice?

[It is suggested to put claim 9 in independent form and to recite the process limitations in claim 9 in terms of structural elements or in the means -for-function as authorized by 112, 6th paragraph so as to obviate the above rejections]

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' Disclosure of Admitted Prior Art or the Knott's Publication.

Applicants admit at page 5, lines 9-16 of the specification, that compared to an assembly of conventional distillation columns, dividing wall columns and thermally coupled columns offer advantages both in respect of energy consumption and in terms

of capital costs. Information on dividing wall columns or thermally coupled distillation columns is given in EP-A 0 122 367, EP-B 0 126 288 and EP-B 0 133 510.

See also Figures 1 and 2 of the Knott's publication disclosing basically similar teachings, supra. The "wherein" clause in claim 9 does not define any structure, and accordingly cannot be distinguished from the prior art in the structural sense. The clause is directed more to "process" rather than to apparatus to which claim 9 is directed. (A process limitation is not the basis of patentability of an apparatus claim).

Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' Disclosure of Admitted Prior Art or the Knott's publication as applied to claim 9 above, and in view of Long (5, 100, 634).

It would have been obvious to one of ordinary skill in the art , at the time the invention was made, to provide a droplet precipitator in the apparatus admitted to be known by applicants or the Knott's publication ,as claimed , in order to prevent entrainment as taught by Long. Note e.g., col. 2, lines 58-60.

Claims 1-8 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(a) Holiday discloses an apparatus for treating a process of an ammonia chemical production plant.

(b) Watzenberger discloses a process for separating a fraction containing low and middle boilers from a mixture of low, middle boiler and high boilers.

(c) Bocquet et al discloses a method for distilling ammonia.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia Manoharan whose telephone number is (571) 272-1450. The examiner can normally be reached on Tuesday-Friday from 7:00a.m to 6:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola, can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9311.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Manoharan/tgd

March 18, 2004


VIRGINIA MANOHARAN
PRIMARY EXAMINER
ART UNIT 133
